

## REMARKS

Claims 13 to 24 are pending. Applicants respectfully request reconsideration of the present application in view of this response.

Claims 13 to 24 were rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 5,311,346 to Haas, et al. (“Haas reference”) in view of U.S. Patent No. 5,473,457 to Ono (“Ono reference”).

The Haas reference purportedly concerns reducing the polarization-dependent distortion of an optical signal transmitted through an optical fiber by aligning the polarization of the optical signal to minimize the received signal distortion. The reference further recites that a polarization controller may be located at either the input or output end of a long haul optical fiber system and is used to align the polarization of the signal to minimize the received signal distortion.

The Ono reference purportedly concerns compensating dispersion of polarization where the signal light supplied from an output end of an optical fiber is supplied to a polarization controller, from which the signal light is supplied to a polarization maintaining optical fiber. The reference further recites that an output signal light of the polarization maintaining optical fiber is supplied to a polarization separating device, in which two orthogonal polarizations are obtained – signal light of the two orthogonal polarizations are received by a balanced photodetector in which an electric signal is generated. Further, the polarization controller is controlled to minimize the intensity to that the dispersion in the transmission line is compensated to suppress the deterioration of the wave-shape.

The cited Haas and Ono references do not teach or suggest all of the features of the present claims. Claim 13 of the present invention concerns a method for reducing distortion of an optical pulse contained in a communication-transmitting luminous flux in an optical communication system caused by polarization mode dispersion. Claim 13 requires, among other features, using a small, coupled-out portion of the communication-transmitting luminous flux to determine the transmission quality of the optical communication system. Neither the Haas and Ono references appear to have this feature. Fig. 1 of the Ono reference, as cited in the Office Action, recites an apparatus for compensating the dispersion of polarization using a semiconductor laser light, a bias current source whose current is modulated by a sine-wave signal of a frequency, an intensity modulator for modulating the signal light by data, a polarization controller which received the signal, a fiber for transmitting the polarization maintaining optical fiber, an optical coupler for branching the

polarization controlled signal, an optical receiver for detecting the data from the received signal light, dual PIN photodiodes for converting the two signal lights to electric signals, an amplifier for amplifying an output signal of the photodiodes, an intensity detector for detecting the signal component, and a control unit for controlling the polarization controller. It appears that the Ono reference detects an intensity of the sine-wave signal to monitor intensity, and to keep it so that the intensity of the sine-wave signal is controlled to be constantly minimum. In contrast, claim 13 uses a small, coupled-out portion of the communication-transmitting luminous flux to determine the transmission quality of the optical communication system.

Accordingly, Applicants respectfully submit that the Haas and Ono references, alone or in combination, do not teach or suggest all of the features of claim 13. Claims 14 to 16 depend from claim 13 and are allowable for the same reasons. Claim 17 and its dependent claims 18 to 24, recite features analogous to claim 13, and are therefore allowable for essentially the same reasons as claim 13.

Accordingly, Applicants respectfully submit that claims 13 to 24, are allowable; and, withdrawal of the rejection of claims 13 to 24 is respectfully requested.

#### CONCLUSION

In view of the foregoing, it is believed that claims 13 to 24 are now allowable, and that the rejections of those claims have been overcome. It is therefore respectfully requested that the present application issue.

Respectfully submitted,  
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